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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/060,302 | 02/01/2002 | Marc H. Schneider | 03438.0083 | 8318 |

7590

12/07/2004

Finnegan, Henderson, Farabow,
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Washington, DC 20005-3315

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| EXAMINER |
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RAJGURU, UMAKANT K

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| ART UNIT | PAPER NUMBER |
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1711

DATE MAILED: 12/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/060,302

Applicant(s)

SCHNEIDER, MARC H.

Examiner

Umakant K. Rajguru

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8 and 10-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8 and 10-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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1. An RCE and IDS have been filed on Sep. 02, 2004.
2. Claims 8 and 10-12 are under examination.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 8 & 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Giebeler et al (US 4678715) in view of (a) Valcke et al (US 5804591) and Shafael (EP 1069173).

Giebeler describes a process for improving wood (col. 1, lines 5-7). The process comprises treating wood with polymer which is deposited in layers of wood (col. 1, lines 45-54). Monomeric reactive components of polymer are maleic acid or maleic anhydride, furfuryl alcohol, urea, phenol etc (col. 3, lines 3-10). Heating of treated wood is done in intermittent stages to bring about curing (col. 3, lines 41-59).

Giebeler does not mention borax (of instant claim 8).

Shafael uses borax, and boric acid for reducing inflammability of a substrate. In example 1 in col. 5, patentee uses above chemicals for wood.

Valcke describes fungicidal compositions which comprise borax (col. 12, lines 52) and sodium lignosulfate (col. 16, line 32).

It would therefore have been obvious to include in the process of Giebeler borax (of the secondary references) for imparting flame retardance, wetting, dispersion and mixing.

It is noted that prior art does not disclose the curing of the composition (which is used for impregnating wood) by submerging the wood in hot oil (as claimed in instant

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claim 12). It is conventionally known that hot oil is useful for heating especially for temperatures above 100°C. Therefore it would also have been obvious to use such a step for curing in the process of Giebeler.

Applicant's argument (on page 8 of response filed on Sep 02, 2004) that "there is no teaching in Giebeler that furfuryl alcohol and maleic anhydride or acid are used together" is not convincing since Giebeler in col. 8, lines 3-10 teaches a process wherein furfuryl alcohol is present with maleic anhydride or maleic acid.

Applicant's next argument on page 9, that "borax of Shafael and Valcke is not used for preservation wood" is not persuasive since it is immaterial for what purpose the borax is used by Shafael and Valcke. Shafael uses it for imparting flame retardance. Valcke uses it for imparting resistance against microorganisms. Teachings of these two references therefore offer an incentive to one of ordinary skill in the art to use borax in the process of Giebeler to make wood resistant to flames or fires and also against attack by microorganisms. Such use of borax additionally is likely to help furan polymer to disperse uniformly inside the wood. However this aspect of use of borax according to the examiner is a consequential effect. Contrary to what the applicant observes, there is no hindsight reconstruction in the rejection of above claims. The claims are prima facie obvious in view of prior art.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Umakant K Rajguru whose telephone number is 571-272-1077. The examiner can normally be reached on Monday thru Friday from 9:30 AM to 6:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on 571-272-9306. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Rajguru/LR/dh
November 15, 2004



James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700